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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/768,303	01/29/2004	Ozgur C. Leonard	33227/469001	6314

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EXAMINER
WAL, ERIC CHARLES

ART UNIT	PAPER NUMBER
2195	

NOTIFICATION DATE	DELIVERY MODE
09/30/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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	Application No.	Applicant(s)
	10/768,303	LEONARD ET AL.
Office Action Summary	Examiner	Art Unit	
	ERIC C. WAI	2195	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>06 August 2009</u>.

2a) ☐ This action is FINAL.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-8, 10-19, 21-30, 32 and 33</u> is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-8, 10-19, 21-30, and 32-33</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a) ☐ All b) ☐ Some * c) ☐ None of:

   1. ☐ Certified copies of the priority documents have been received.

   2. ☐ Certified copies of the priority documents have been received in Application No. _____.

   3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail. Date _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1-8, 10-19, 21-30, and 32-33 are presented for examination.

Continued Examination Under 37 CFR 1.114

2.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed

on 08/06/2009 has been entered.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1-8, 10-19, 21-30, and 32-33 rejected under 35 U.S.C. 103(a) as being

unpatentable over Berger et al. (US PG Pub No. US 2003/0014466 A1), in view of

McMillan et al. (US PG Pub No. US 2005/0076326 A1), in view of Armstrong et al. (US

PG Pub No. US 2002/156824 A1), further in view of Midgley (US PG Pub No. US

2006/0168224 A1).

5.   Armstrong was disclosed in IDS dated 9/29/2005. Berger was disclosed in IDS

dated 04/23/2008.

6.   Regarding claim 1, Berger teaches a machine-implemented method, comprising:

        establishing a plurality of non-global operating system partitions within a global

operating system environment provided by the operating system, wherein each non-

global operating system partition serves to isolate processes running within that non-

global operating system partition from other non-global operating system partitions

within the global operating system environment, wherein enforcement of boundaries

between the non-global operating system partitions is carried out by the operating

system, and wherein the plurality of non-global operating system partitions comprises a

particular non-global operating system partition ([0035] lines 9-14, wherein an operating

system sets up logically protected computing environments or compartments);

        ensuring that processes running within the particular non-global operating system

partition are allowed to utilize only the resources assigned to that partition ([0035] lines

20-22).

7.   Berger does not explicitly teach that each of the non-global partitions comprises

a file system. McMillan teaches the use of separate file systems for each of a semi-

independent virtual OS environments operating within the scope of a main operating

system ([0008]). It would have been obvious to one of ordinary skill in the art at the time

of the invention to try to modify Berger to explicitly teach a separate file system for each partition. One would be motivated by the desire to provide better isolation from each of the other environments as taught by McMillan.

8.   Berger does not explicitly teach associating the particular non-global operating system partition with a first resource pool comprising one or more resources. Armstrong teaches the use of processor resource pools in logically partitioned system ([0011-0012]). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Berger to include processor resource pools. Since Berger only discloses methods to assign network resources, one would be motivated by the desire to include a way of assigning each compartment in Berger to a processor resource pool.

9.   Berger and Armstrong teach: receiving a request to change the resource pool association for the particular non-global operating system partition to associate the particular non-global operating system partition with a second resource pool instead of the first resource pool, wherein the second resource pool is a different resource pool from the first resource pool, and wherein the second resource pool comprises one or more resources (Armstrong [0009], wherein resources can be reallocated according to a user);

        changing the resource pool association for the particular non-global operating system partition to cause the particular non-global operating system partition to be associated with the second resource pool instead of the first resource pool (Armstrong [0009], wherein resources can be reallocated); and

ensuring that the processes running within the particular non-global operating

system partition are allowed to utilize only the resources in the second resource pool

(Berger [0035] lines 20-22 and Armstrong [0010]).

10.   Berger and Armstrong do not teach that changing the resource pool associations

is performed without terminating and restarting the processes running within the

particular non-global operating system partition.

11.   Midgley teaches a method of allocated resources from a server pool without the

need to restart the server ([0006]). Midgley teaches that such methods reduce the

amount of downtime encountered in a server environment ([0003]). It would have been

obvious to one of ordinary skill in the art to allow for changes in resource associations to

be performed without terminating and restarting the processes. One would be motivated

by the desire to reduce the downtime encountered as taught by Midgley.

12.   Regarding claim 2, Armstrong teaches that the first resource pool comprises one

or more processors ([0012]).

13.   Regarding claim 3, Armstrong teaches that ensuring comprises: assigning work

from processes running within the particular non-global operating system partition to

only the one or more processors in the first resource pool ([0011], wherein each logical

partition is constrained to execute in an assigned processor set).

14.   Regarding claim 4, Armstrong teaches that the first resource pool comprises an

indication of a maximum amount of memory that can be consumed ([0023]).

15.   Regarding claim 5, Berger, McMillan, Armstrong, and Midgley do not explicitly

teach that ensuring comprises:

        receiving, from a particular process running within the particular non-global

operating system partition, a memory allocation request; determining whether granting

the memory allocation request would cause the maximum amount of memory that can

be consumed to be exceeded; and in response to a determination that granting the

memory allocation request would not cause the maximum amount of memory that can

be consumed to be exceeded, granting the memory allocation request.

16.   However, it is old and well known that operating system manage memory

allocation requests and grant them accordingly. It would have been obvious to one of

ordinary skill in the art to modify Berger and Armstrong to explicitly teach memory

management.

17.   Regarding claim 6, Berger, McMillan, Armstrong, and Midgley do not explicitly

teach ensuring further comprises: in response to a determination that granting the

memory allocation request would cause the maximum amount of memory that can be

consumed to be exceeded, deallocating sufficient memory from one or more other

processes to enable the memory allocation request to be granted without causing the

maximum amount of memory that can be consumed to be exceeded; and granting the

memory allocation request.

18.   It is old and well known that OS can reallocate resources to ensure the efficient

management of resources such as when a high priority process has an urgent

processing target that needs to be met. It would have been obvious to one of ordinary

skill in the art at the time of the invention to deallocate sufficient memory from one or

more other processes to enable the memory allocation request to be granted without

causing the maximum amount of memory that can be consumed to be exceeded and

granting the memory allocation request. One would be motivated by the desire to

ensure that high priority requests are granted.

19.   Regarding claim 7, Berger teaches that the operating system is executed on a

computer system, and wherein the resources in the first resource pool are just a subset

of a total set of resources available on the computer system ([0035] lines 20-26).

20.   Regarding claim 8, Armstrong teaches that ensuring comprises: associating each

process running within the particular non-global operating system partition with the first

resource pool ([0011], wherein each logical partition is constrained to execute in an

assigned processor set).

21.   Regarding claim 10, Armstrong teaches that ensuring that processes running

within the particular non-global operating system partition are allowed to utilize only the

resources in the second resource pool comprises: associating each process running

within the particular non-global partition with the second resource pool instead of the

first resource pool ([0011], wherein each logical partition is constrained to execute in an

assigned processor set).

22.   Regarding claim 11, Berger, McMillan, Armstrong, and Midgley do not explicitly

teach that the operating system executes on a computer system, and wherein the

method further comprises: prior to receiving the request to change the resource pool

association: receiving, from a particular process running within the particular non-global

operating system partition, a request for information pertaining to all resources; and

providing, to the particular process, information pertaining only to the one or more

resources in the first resource pool, even though the computer system comprises other

resources.

23.   Armstrong teaches that each partition is completely separated from each other

([0034]). It would have been obvious to one of ordinary skill in the art at the time of the

invention to provide information pertaining only to the one or more resources in the first

resource pool, even though the computer system comprises other resources. One

would be motivated by the desire to enforce isolation of partitions as indicated by

Armstrong ([0034]).

24.   Regarding claims 12-19, 21-30, and 32-33, they are the machine-readable

medium and apparatus claims of claims 1-8, and 10-11 above. Therefore, they are

rejected for the same reasons as claims 1-8, and 10-11 above.

Response to Arguments

25.   Applicant's arguments with respect to claims 1-8, 10-19, 21-30, and 32-33 have

been considered but are moot in view of the new ground(s) of rejection.

Conclusion

26.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Eric C. Wai whose telephone number is 571-270-1012.

The examiner can normally be reached on Mon-Thurs, 9am-5pm.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Meng - Ai An can be reached on 571-272-3756. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Meng-Ai An/   /Eric C Wai/
Supervisory Patent Examiner, Art Unit 2195   Examiner, Art Unit 2195